

Coordinating a Community Study of Environmental Health

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FOUR URBAN areas in the United States, Fort Wayne, Ind., Omaha, Nebr., Lake County, Ill., and Springfield, Mo., conducted environmental health surveys during 1962-63 with a view to community planning.

An environmental health study may be defined as a comprehensive analysis of all the health-related services and facilities in an area with an evaluation of pertinent local ordinances and enforcement procedures. It culminates in a report identifying any deficiencies in facilities or quality of services offered and recommends corrective measures, including physical changes in the metropolitan area. Such a survey is an essential element in a city's master plan.

The health programs which have been considered in environmental health surveys have been concerned mainly with the external and physical aspects of an urban environment. Milk and food sanitation, housing, water supply, water pollution, air pollution, waste disposal, radiation sources, and public nuisances have been the most significant areas of environmental health interest which have been analyzed. The basic intention of such analysis is to apply principles of preventive medicine to environmental sanitation. Conditions surveyed in a study are considered not only with regard to their immediate solution but also to their long-range effects. By calling attention

to benign conditions which have a potential malignancy, it may be possible to plan the expansion of an area's programs so as to prevent future distress.

Methods of Conducting a Study

The four environmental health studies mentioned were not similarly organized, although all four used the Public Health Service's "Environmental Health Planning Guide" (1). This booklet provides guidance in the development of detailed information on each of the subjects analyzed in an environmental health study. The method of organizing a study to accomplish its objectives, however, is determined individually by each community.

Two of the environmental health studies were conducted jointly by State and county health departments and the Public Health Service, with the county health department serving as coordinator. The 1962 Omaha-Douglas County, Nebr., study concerned only a portion of the county and a few municipalities within that portion. The 1961 Lake County, Ill., study was devoted to the whole area of the county and considered only county aspects of environmental health, excluding those related to cities within the county.

The 1961 Fort Wayne-Allen County, Ind., environmental health study was a joint effort of city, county, and State health officials and the Public Health Service, coordinated by a citizens committee. City and county officials gathered the necessary background information for the citizens committee which, with the assistance of State health officials and the Public Health

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Service, analyzed the data and prepared a report on environmental health in the entire area of the county, including cities.

The 1963 Springfield, Mo., study was a combined effort of city officials, county and State health officials, and the Public Health Service. It was coordinated by a member of the city manager's staff. The study encompassed the entire area of the city and that portion of the county included in studies being made for the area's master plan. Detailed information on environmental health in both the city and that portion of the county was compiled, and recommendations were made for both areas.

Little expense is entailed in an environmental health study since the officials concerned usually undertake it as an additional duty. The primary motivation is the desire of each participating agency to provide a service for the public which it serves. The only substantial expenditure is for printing the final report.

Administration of the Study

While the method of organizing an environmental health survey and, consequently, determining which agencies will participate will vary with localities, the need for administrative techniques to coordinate all the details is general. Coordination presents the chief difficulty in most such surveys, according to Public Health Service officials. Since the studies are usually joint efforts of several governmental agencies and none is in a position to direct the activities of the other, planning the various stages of the study and assigning certain areas of responsibility is of great importance. The study may be broken down into basic initial, intermediate, and final steps.

Basic Initial Steps

The impetus for an environmental health study may come from planning or health officials, planning commissions, elected city or county representatives, or an interested citizenry. Regardless of the source, because of the area and the topics to be surveyed the study will inevitably concern several different governmental agencies. Officials interested in conducting a study will usually seek information

The Urban Situation

"Increasing population and increasing concentrations of people into the urban areas of the United States have accentuated environmental problems in two important, related ways: (1) as our air, water, and land resources are fixed, increasing populations decrease the quantity of each of these basic necessities available to the individual; (2) with increasing amounts of waste products concentrated in areas with growing populations, the relative effects of these wastes on man are increasing at an ever-increasing rate. These threats are of an insidious nature, a form of creeping paralysis which, if not recognized and corrected, can lead to urban stagnation and death as surely as the most violent epidemic."—From *"Report of the Committee on Environmental Health Problems to the Surgeon General,"* 1962, Washington, D.C.

and assistance from their State health department in organizing the project. Initial conferences with State and Federal health officials will probably determine what agencies will participate. Nonlocal governmental health officials, State or Federal, having witnessed environmental health conditions in other areas, can offer constructive criticism if invited to participate.

Once the participating agencies are designated, they state the objectives of their study in a written agreement, delineating the responsibilities of each agency. Such a statement will help prevent later misunderstandings.

Each participating agency designates representatives to supply specific information on the study topics relevant to the agency. These representatives will comprise a committee of the whole to make all decisions and recommendations for the study report. It has been said that a camel is a horse put together by a committee, and this statement will certainly hold true if one of the members is not designated as chairman, either by consent of the directors of the participating agencies or through election by the committee members. The chairman needs to be vested with sufficient authority to coordinate efforts of all participants toward accomplishment of the objectives.

At the first meeting of the committee, the ob-

jectives of the study are outlined and explained to all participants. Once the objectives are stated, the committee estimates the length of time needed to complete the study, and the committee chairman develops a schedule of the events which will take place during this period, with the time sequence for each stage of the study. The schedule is distributed to all members of the committee so that they may plan on completing their assignments and make arrangements for attending the meetings.

The committee needs also to decide at this meeting the exact geographic area to be encompassed in the study unless this decision was made by the directors of the participating agencies when the study was agreed upon. The size of the study area will largely determine the time required for collection and analysis of data. It is desirable that the study area coincide with an area which has been the subject of a comprehensive plan. Some information needed in the environmental health study may have been compiled through research on the master plan. If a master plan has not been completed, the environmental health study may be included in the scope of that study and referenced accordingly.

The study coordinator assigns persons participating in the survey specific topics for which they will be responsible. Work assignments are related to topics with which the participant is familiar. Subjects commonly analyzed in environmental health studies are: health agency operations, planning agency operations, housing programs, radiological health factors, refuse collection and disposal, sanitation programs, sewerage services, water supply services, and noise.

The "Environmental Health Planning Guide" provides guidance for collecting data on these subjects and includes forms. It will help if copies of these forms are distributed to committee members when specific topics are assigned.

Intermediate Steps

Most of the detailed work in an environmental health study will consist of the data gathered by members of the committee. After initial orientation meetings have been held and the purpose and scope of the study has been

established, committee members begin compiling the required information. This information may be obtained by field studies using certain types of sampling devices or by review of existing rules, regulations, procedures, organization, or facilities. Progress meetings during this period will review any problems encountered and keep all participants informed of what other committee members are doing. Each committee member may review the work he has done to date before the whole committee and ask for suggestions from the other members. When progress meetings reveal that work assignments are nearing completion, a date is set for collection of forms containing the necessary data, and they are reviewed by

Suggested Outline for Summary

1. Title of subject and area covered.
 2. General statement on the subject including—
 - (a) Importance in environmental planning.
 - (b) Overall effects on the health, social, and economic factors in the community.
 - (c) Interrelation with other environmental factors.
 - (d) Description of acceptable standards for the subject.
 3. Describe conditions in the community relating to this subject including—
 - (a) Conditions noted in study.
 - (b) Areas where conditions do not meet accepted standards.
 - (c) Governmental agency responsible for control of subject.
 - (d) Present agency policies and activities relative to this subject.
 - (e) Effectiveness of present policies and activities.
 4. Recommendations for means of improvement to reach acceptable standards:
 - (a) With existing resources: suggested policy changes; changed enforcement procedures; realignment of responsibility; additional enforcement authority; educational procedures; other means.
 - (b) With expanded resources: additional funds; additional personnel; altered administration, such as transfer of responsibility or establishment of new department; with enabling legislation, either city, county, or State.
 5. Recommendations of long-range goals. (Include necessity for and means of obtaining.)
 6. Establish priority of recommendations based on financial or other reasons.
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the study coordinator. In a method used successfully in one study, city and county members of the study committee gathered the data, and officials of the State health department and the Public Health Service reviewed the information for accuracy and completeness. Review at this stage mainly insures that adequate information has been compiled on all study subjects.

After this review, the forms are returned to the respective committee members with comments from the study coordinator or State or Federal health official. The study coordinator, often an administrator unfamiliar with all details of some of the subjects covered, will probably rely on the judgments of State and Federal specialists trained in the field of environmental sanitation. These specialists are not necessarily more competent than local health officials but are probably more objective in evaluating local conditions than officials who meet the conditions day by day. The forms are returned to the committee members so that they can prepare a narrative summary of the present condition and future needs in their areas. The summary will entail an analysis of the topic with which each member is most familiar. Committee members need to be objective if this summary is to be meaningful. Uniformity in the method of discussing and presenting each topic will greatly assist in the final editing of the study report and contribute to its continuity. Not every subject analyzed can be presented in the same format; however, an outline will assist committee members in preparing understandable summaries (see page 539).

Final Steps

As in the other stages of a study, in the final steps the coordinator reviews progress of the committee members on their preparation of narrative summaries for assigned topics. It may prove necessary to schedule meetings of a few committee members whose subjects are closely related to insure that certain overlapping areas are covered adequately and without duplication. The coordinator needs also to review the original schedule for the study to determine if modifications are needed. If no unusual de-

velopments have occurred, the narrative summaries and supporting data are collected from committee members on the date indicated.

The summaries and supporting data are subjected to the same type of analysis, preferably by State and Federal health officials participating in the survey, as when the statistical data were first submitted. On completion of their review, these officials summarize their impressions to the entire study committee. It will be beneficial if each committee member's report can be reproduced and distributed to the other members. By reviewing this material and hearing the comments of State and Federal health officials, the committee members will be in a position to evaluate environmental health in the study area and decide what course to pursue. The recommendations made by each member are reviewed and approved by the committee as a whole. If additional research is considered necessary on some topics, the committee specifies its desires to the appropriate person.

While the final requirements of the committee are being completed, the study coordinator considers the type, appearance, and location of graphics to be included in the published study report. Aside from being attractive embellishments, graphics focus attention on the subject presented. Some graphics, such as maps and charts, will be essential in the presentation and understanding of the material or area covered. For example, the Springfield study included graphics showing wind direction and speed for the area. In some cases an area cannot be envisioned without a map to give perspective. Photographs may also be desirable. Since the final report will be printed for wide distribution, the coordinator must effect a means of preparing these graphics for eventual reproduction. This may include arrangements for drafting, photographic reduction, or color coding, work which can usually be accomplished by technicians in a planning or public works department.

Following the meeting in which the government officials present their analysis, the committee reviews additional information requested and each recommendation to be contained in the final report. Any questions raised by members are thoroughly resolved at this point. The

committee also reviews and approves all graphics and decides on the format of the final report. It will be helpful if the study coordinator has a sample outline for the committee to consider in deciding the report format.

The conclusions reached in environmental health studies may vary in different locales, since standards accepted as normal in one area may be rated as substandard in another. The committee decides if the conditions reported on the various subjects indicate that adequate programs are being conducted or if additional provisions should be made. In considering the final recommendations to be included in the report, the committee needs to consider the feasibility of putting the recommendations into effect. Recommendations for changes in procedures or facilities need to be supported by concrete evidence that the changes will produce certain given results. All recommendations will not require the expenditure of additional funds; however, there may be certain conditions in the local area which would preclude the recommendations from ever gaining public acceptance. Recommendations which cannot be implemented because of impracticability are not likely to be well received by the residents and may detract from sound recommendations in the report.

For continuity, one member of the committee edits the final report. The person selected also reviews the narrative sections of each topic to insure that the method of presentation gives full coverage of the subject being analyzed. The recommendations on all topics contained in the report are summarized at the beginning. Evidence to support these recommendations is expanded in sufficient detail in appropriate later sections. In the final draft, graphics are arranged in proper sequence to support the narrative and statistical data.

A review of the final draft with the heads of the agencies participating in the survey may prove useful. It will inform them in advance of the recommendations to be made and permit them to offer suggestions for inclusion in the report.

Distribution of the report. The printed report is submitted to the heads of the participating agencies and distributed to the public. If appropriate, it is also submitted to the chief ad-

ministrative officers and the elected officials of the area covered by the study. The report is usually the climax of months of research, and every effort is made to obtain maximum publicity for it. Public relations both during the study and at its completion are important to eventual success of the study. If the study is to be fruitful, the general public must understand it. A comprehensive program of news releases at various stages of the study will build public understanding and support.

The report itself needs as wide distribution as possible. A distribution list is established to include all civic organizations, physicians, dentists, teachers, directors of the chamber of commerce, business leaders, and other interested residents of the area. Copies are also placed on file in the public libraries for use by students and the public. Only by reaching the broadest possible audience can the report stimulate increased public awareness of how essential public health safeguards are in today's urban environment. Without public understanding and support government officials will hesitate to put the report's recommendations into practice.

Implementation of the report. The ultimate value of the report will depend on its content, acceptance, and use by the persons responsible for carrying out its recommendations. Legislative officials may use the report as a basis for enacting new ordinances or enabling legislation to implement some of the recommendations. The chief administrative officer of the area or areas covered by the report may use it as a guide for developing new programs or facilities to be included in recommendations for the budget for the next fiscal year. Heads of the participating agencies may use the recommendations to alter their administrative procedures or organization so as to more effectively accomplish their assigned responsibilities. The planner will visualize all recommendations and relate them to other phases of the comprehensive plan so that the long-range plans of the area may be aimed at preventing future health problems.

The implementation of the recommendations in the report will not happen by accident or coincidence. In some instances the completion of the study report will only be the beginning of the task of accomplishing its objectives. To

follow up on the report the participating agencies will need to assign to some member of their organization the responsibility of pursuing whatever additional investigations are warranted by the recommendations and of making frequent reports to the head of the agency on the progress in completing recommendations. Whatever the method, some means of imple-

mentation are needed if the full benefits of the study are ever to be realized.

REFERENCE

- (1) U.S. Public Health Service: Environmental Health Planning Guide. PHS Publication No. 823, revised. U.S. Government Printing Office, Washington, D.C., 1962.

Program Notes

Academy of Pediatrics subcommittee on accidental poisoning recommends that parents of small children keep on hand powdered activated charcoal, which can be mixed with water to form a soup that inactivates many poisons before they can be absorbed from the stomach.

Sanitary Engineers Automate

A new computer system in the New York Health Department's division of environmental health services, which can calculate stream waste assimilation, releases engineers from desk drudgery for added time in the field. In a recent demonstration, Paul H. Berry, senior sanitary engineer, completed a sample calculation in 7 minutes which he said would normally require an engineer a full week to work out.

Grants for Sewerage Studies

Twenty-eight grants, totaling \$1,894,989, have been made since 1962 to New York municipalities for studying sewerage needs. Dr. Hollis S. Ingraham, New York State health commissioner, said the grants encourage comprehensive planning of sewage treatment facilities within drainage basins and areas with common water resource problems.

New County Health Department

Broome County is the 22d county in New York to set up a health department and the 16th to take this step since State aid was increased in a 1946 law revision. The 1946 statute allows counties 75 percent of the first \$100,000 and 50 percent of additional expenditures. The old law gave county health departments a flat 50 percent.

Poison Antidotes Recommended

To mitigate the effects of accidental poisoning, pharmacists in Kalamazoo, Mich., supplied pediatricians with free half-ounce bottles of syrup of ipecac, which the pediatricians in turn gave to parents of small children. If an accident occurred, parents were to telephone the pediatrician for prescription of the proper dose and instructions for further care.

In addition to syrup of ipecac, which causes vomiting, the American

Symposium for Senior Drivers

The first Symposium on the Senior Driver and Pedestrian was held in Denver, Colo., in May 1964. Participants included specialists in gerontology, traffic safety, driver education, law enforcement, and automobile design. Among the meeting's sponsors were the University of Denver and several agencies of the Department of Health, Education, and Welfare.

City's Seventh Foot-Care Clinic

Philadelphia opened its seventh "Keep Them Walking" foot-care clinic for the elderly on February 7, 1964. The seven clinics are part of a 3-year demonstration project begun in July 1962 by the city's department of health in cooperation with St. Luke's and Children's Medical Center with a Public Health Service grant. In the first 18 months the clinics provided services to more than 5,000 Philadelphians.